Remarks

This application has been carefully reviewed in light of the Office Action dated April 7, 2009. Claims 14 and 17 to 29 remain in the application, of which claims 14, 21, 25 and 29 are the independent claims. Reconsideration and further examination are respectfully requested.

As an initial matter, Applicants note that both the final and non-final action boxes were marked in the Office Action Summary. Because the Examiner did not indicate that the Office Action is final in the conclusion section on page 10 of the Office Action, Applicants believe that the Office Action is non-final.

Claim Rejections – 35 USC § 101

Claims 14 and 17-20 were rejected under 35 USC § 101 for being directed to non-statutory subject matter. Applicants respectfully traverse.

Regarding claim 14, the recitation "in a base station" requires that the method of 14 be performed in a base station and is not merely an intended use. (Emphasis added). Because the method of claim 14 is performed in a base station, Applicants submit that claim 14 is tied to a particular apparatus (i.e., base station), and therefore constitutes patentable-subject matter under 35 USC § 101 for at least this reason.

Therefore, Applicants respectfully request that the section 101 rejection of claim 14, and claims 17-20 which depend from claim 14, be withdrawn.

Claim Rejections – 35 USC § 103

Claims 14 and 17-29 were rejected under 35 USC § 103(a) as being unpatentable over U.S. Patent No. 5,621,723 ("Walton") further in view of U.S. Patent No. 5,832,387 ("Bae")

further in view of U.S. Patent No. 5,930,706 ("Raith"). Reconsideration and withdrawal of these rejections are respectfully requested.

Independent claim 14 is directed to a method in a base station comprising receiving from a single remote station a reverse link signal that comprises a plurality of subchannel signals, independently adjusting transmit powers of more than one of said plurality of subchannel signals to different levels by generating power control messages for adjusting the transmit powers of more than one of said plurality of subchannel signals, and comparing a frame error rate of each of said subchannel signals with a frame error rate threshold for said generating said power control messages.

None of the applied references, taken either alone or in combination, is seen to disclose or suggest at least the features of receiving from a single remote station a reverse link signal that comprises a plurality of subchannels and independently adjusting transmit powers of more than one of the plurality of subchannels signals to different levels by generating power control messages for adjusting the transmit powers of more than one of said plurality of subchannel signals.

Walton is seen to be generally directed to power control on the reverse link of a CDMA system. As read by Applicants, Walton teaches eight reverse packet data channels associated with different data rates that are supported in a packet data network. Walton, col. 3, ll. 31-40. Walton also teaches that a mobile unit determines a reverse link data rate based on its power class and estimated power margin, and selects the reverse packet data channel corresponding to the maximum data rate which the link can support. Walton, col. 3, ll. 22-30. Thus, the mobile unit of Walton determines a data rate, selects one of the reverse link data channels for transmission to the base station based on the data rate determination, and transmits to the base

station on the selected reverse link data channel. Thus, the base station of Walton receives a reverse link signal from the mobile unit comprising the selected one of the reverse packet data channels. The reverse link signal does not comprise more than one of the reverse packet data channels, and therefore does not constitute a reverse link signal that comprises a plurality of subchannels, as recited in claim 14. Thus, Walton does not teach or suggest the feature of receiving from a single remote station a reverse link signal that comprises a plurality of subchannel signals.

Because Walton fails to teach or suggest receiving a reverse link signal from a single remote station that comprises a plurality of subchannel signals, Walton also does not teach or suggest independently adjusting transmit powers of more than one of the plurality of subchannels signals of the reverse link signal to different levels.

Neither Bae nor Raith are seen to remedy the foregoing deficiencies of Walton for at least the reason set forth below.

Bae is directed to a power allocation apparatus for a multicarrier transmission system, in which data is transmitted on a transmission channel comprising subchannels having different frequency bands. Bae, col. 1, ll. 7-11, and col. 4, ll. 57-61. Bae is not directed to a CDMA system. The purpose of the power allocation apparatus of Bae is to allocate power to the different subchannels in a manner that compensates for efficiency losses of the multicarrier transmission system caused by frequency selective interference. Bae, col. 7, ll. 4-13 and col. 7, l. 66 to col. 8, l. 4 and Fig. 9. Because the subchannels have different frequency bands, the frequency selective interference impacts the signal-to-noise ratios (SNRs) of the subchannels differently. Bae, Fig. 10B and col. 7, ll. 20-24. The power allocation apparatus of Bae compensates the multi-carrier transmission system for frequency selective interference by

initially assigning power to subchannels of different frequency bands in proportion to calculated SNRs for the subchannels (Fig. 10B), limiting the power for subchannels within frequency band f_1 to power limit P_1 (Fig. 11A), reassigning remaining power to the other subchannels (Fig. 11B), and limiting the power for subchannels within frequency band f_2 to power limit P_2 (Fig. 11C). Bae, Figs. 10B-11C and col. 7, ll. 30-56. The power limits are dependant on the frequency bands of the subchannels.

One skilled in the art to would not have modified Walton to incorporate the power control of Bae. For one thing, Walton and Bae are directed to power control for systems based on much different modulation schemes. Walton is directed to power control for a CDMA system, in which different channels are separated by different spreading codes. Walton, Abstract, col. 1, ll. 7-29, col. 2, ll. 53-54, and col. 4, ll. 4-26. By contrast, Bae is directed to power control for a multicarrier transmission system, in which different subchannels are separated by different frequency bands. Bae, col. 1, ll. 7-11, and col. 4, ll. 57-61. The power control of Bae is specifically designed for a multicarrier transmission system to allocate power to subchannels of different frequency bands to compensate for frequency selective interference. The power allocation of Bae is based on the principle that frequency selective interference impacts the subchannels of Bae differently due to their different frequency bands, and is therefore specific to multicarrier transmission systems. Because the power control of Bae is specific to multicarrier transmissions systems, the power control of Bae is not applicable to the CDMA system of Walton. Therefore, one skilled in the art would not have modified Walton to incorporate the power control of Bae.

Raith, which was cited by the Office Action for its alleged disclosure of the power control message being based on a frame error rate, fails to remedy the above deficiencies of Walton and

Bae. More particularly, Raith fails to disclose or suggest the features of receiving from a single remote station a reverse link signal that comprises a plurality of subchannel signals and independently adjusting transmit powers of more than one of the plurality of subchannels signals to different levels by generating power control messages for adjusting the transmit powers of more than one of said plurality of subchannel signals.

For at least the reasons above, Applicants believe that claim 14 is allowable over the applied references and respectfully request that the rejection of claim 14 be withdrawn.

Independent claims 21, 25 and 29 includes features similar to those of claim 14, and are believed to also be allowable over the applied references for at least the reasons given for claim 14.

The other claims currently under consideration in the application are dependent from the independent claims discussed above and therefore are believed to be allowable over the applied references for at least the same reasons. Because each dependent claims is deemed to define an addition aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

CONCLUSION

In light of the amendments and remarks contained herein, Applicants submit that the application is in condition for allowance, for which early action is requested. Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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